UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
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DALLAS TX 75202-2733

MAR 10 2010

Mr. David Keith
Project Coordinator
Anchor QEA
2113 Government Street
Building D, Suite 3
Ocean Springs, MS 39654

RE: Comments on Draft COPC Technical Memorandum

Dear Mr. Keith:

The U.S. Environmental Protection Agency (EPA) has completed its review of the *Draft COPC Technical Memorandum* (dated February 2011) for the San Jacinto River Waste Pits Superfund Site.

Enclosed with this letter are EPA review comments for the purpose of the Unilateral Administrative Order for Remedial Investigation/Feasibility Study for this site.

Please address each review comment and feel free to contact me at (214) 665-8409, or by email at tzhone.stephen@epa.gov, if there are any questions or comments.

Sincerely,

Stephen L. Tzhone
Remedial Project Manager

Enclosure

cc: Ms. Ludmila Voskov, TCEQ
Ms. Jessica White, NOAA
Ms. Herminia Palacio, HCPHES

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EPA Comments on: *Draft COPC Technical Memorandum (*dated February 2011)

1. General: It is not typical to use only correlation to screen out chemicals before the ecological or human health risk assessment. Other methodologies must also be shown to justify screening out COPCs. This is a reminder as we enter the risk assessment process.

2. Whole Document: There was much discussion throughout regarding the decision not to analyze archived sediment samples for human health (Intertidal Samples, Section 5.0). Discussion of the decision for other archived samples was less clear. In particular, the Sampling Design (Section 2.1) of the Sediment SAP details that intertidal samples will be collected from six locations at two ecological exposure areas on the Site, and three locations at one ecological exposure area upstream for characterization of exposure of ecological receptors. The Sediment SAP explains that these samples will be analyzed for primary COPCs and additional sediment from these stations will be archived for possible future analyses of secondary COPCs, if necessary. The current evaluation of secondary COPCs, should also include clear discussion of archived samples (including the upstream area) being analyzed for secondary COPCs for ecological exposure pathways.

3. Whole Document: Clarification as to whether the information contained within this document applies to the impoundments north of I-10, the impoundments south of I-10, or both, needs to be done. For example:

    - Section 3, 2nd paragraph, 1st sentence (page 6): need to include "and impoundments south of I-10" after "surrounding the impoundments north of I-10".

    - Section 4.1.2, 2nd paragraph (pg 13): should include discussion of PCB for sediments surrounding the surrounding the southern impoundment and reference that contents within southern impoundment data has not been collected yet.

    - Section 4.1.3 and Section 4.1.4: Does the analysis and additional considerations address both northern and southern impoundments? Text to clarify needs to be added.

    - Section 4.2: Multiple references to 'impoundment' need to be clarified as to which impoundments. Also, what is the applicability of these rationales if any of the rationales were based only sampling on or around a specific impoundment?

    - Section 5.2 (page 25): Multiple references to 'impoundment' need to be clarified as to which impoundments. Also, defined human use areas related to the southern impoundment appear to be missing.

4. Section 1, 2nd paragraph (page 1): remove sentences 5 and 6 ("The "Potential Chemicals… RI/FS Work Plan. Nevertheless… and the 2009 UAO).

5. Section 1, 2nd paragraph, last sentence (page 1): remove "Therefore".

6. Section 1.1, footnote 1 (page 2): evaluation was done on unvalidated data. Evaluation needs to be re-examined under the validated data.

7. Section 3.2 Results and Discussion: This section discusses the comparison of the weighted mass within each polygon for the 2005 and 2010 data sets. There is a statement that the changes within individual polygons were generally greater than laboratory variability (35 percent relative difference), indicating the difference was not attributable to the use of different laboratories. How was this determined? Then there is a related statement that the "dioxin and furan composition of 29 of the 314 polygons (approximately nine percent) was below the 35 percent relative percent difference threshold; these could be considered relatively unchanged between 2005 and 2010." Again, what does this threshold mean and how was it used in this analysis?

8. Section 4.1.1 Frequencies of Detection of Secondary COPCs: - Six secondary COPCs (2,3,4,6-tetrachlorophenol; 2,4,5-trichlorophenol; 2,4,6-trichlorophenol; 2,4-dichlorophenol; hexachlorobenzene; and pentachlorophenol) are proposed to be removed from further consideration in the RI because they were detected in 5 percent or fewer surface sediment samples collected in 2010. Although this information may be available in another previously submitted document, for completeness we suggest that respondents provide a table that compares the detection limit used for these analyses with applicable ecological target concentrations or screening values (fish and wildlife and/or benthos, as appropriate).

9. Section 4.1.3, paragraph 1, sentence 5 (pg 14): remove the word "sediment" prior to "remediation performed to address risk due to dioxins and furans."

10. Section 4.1.3, paragraph 1, sentence 6 (pg 15): replace the word "sediments" with "samples" before "collected from within the impoundments."

11. Section 4.1.3, paragraph 1, sentence 7 (pg 15): replace the word "sediments" with "waste sludge". prior "from within the impoundments for the correlation analyses, the proportion …"

12. Section 4.1.3 Analysis of Statistical Correlations of Secondary COPCs with Dioxins and Furans: For the correlation analysis, the discussion indicates that the proportion of the total dioxin and furan concentration was calculated for each congener using the 2010 surface sediment samples collected from within the original impoundment perimeter, and for 2010 sediment samples collected from outside of the impoundment perimeter (Table 7). The discussion goes on to say that the results support the use of 2,3,7,8-TCDD and 2,3,7,8-TCDF as representative of the impoundment materials because these two congeners show the greatest differences as a percent of total dioxins and furans from within the impoundment perimeter, compared with the percent contribution of these congeners outside the impoundments. Granted, these 2 congeners demonstrate a large difference in the magnitude of the percentage composition relative to the total dioxins and furans when comparing the two areas. We assume here the focus is that the percent contribution for 2,3,7,8-TCDD and 2,3,7,8-TCDF is roughly 10 and 9 times higher within the impoundment compared with outside. If this "greatest difference" is the focus, the respondents should consider that four other congeners reflect a higher difference (some 17 to 12 times higher).

13. Section 4.2, Page 20, 5th bullet: Will analyzing PCBs in archived samples within the northern impoundments area be useful information for selection of a remedy for the specific waste pit portion of the site? Why or why not?

14. Section 5.3.2 Calculation of 95 Percent Upper Confidence Limits on the Mean: This section indicates that 95% upper confidence limits (95% UCLs) on the mean were calculated for use as exposure concentration terms (ECTs) over an area larger than the TRRP default commercial/industrial worker exposure area. Please note that per §350.51(l)(4) of TRRP, the exposure area for a commercial/industrial worker should be assumed to be ½ acre. At an active

facility, a person may demonstrate that a larger area is appropriate based on documented and verifiable worker activity pattern information. Alternatively, a person may use analytical data to demonstrate that contamination is homogeneous across a larger assumed exposure area. See §350.51(l)(4) of TRRP for additional information. Exposure area is not an issue if the maximum concentration is utilized as the ECT.

15. Section 6.0 Summary , "Comparison of Dioxins and Furans in Sediment: 2005 vs. 2010" - The Sediment SAP states (Section 1.9.1) that "Temporal analysis of data from 2005 and 2010 will be carried out to evaluate whether statistically significant changes in surface sediment conditions occurred as a result of Hurricane Ike. If COPC concentrations in surface sediment are found to have changed significantly over this period, the baseline condition for risk assessments will be set by the most recent data, otherwise earlier data will also be used to define the baseline condition." Further, Section 1.10.1.2 of the Sediment SAP states that "if newly collected data for dioxins and furans are found to be statistically significantly different than 2005 data, baseline conditions for all COPCs will be defined by the recent data set for all COPCs. If statistically significant differences are not found, then data collected in 2000 or later will be used to define the baseline condition." The discussion in this section of the COPC Technical Memorandum generally states that dioxin and furan concentrations in surface sediments collected within the preliminary site perimeter in 2010 were significantly different from those in 2005, thus sediment data from 2005 and before should not be included in the baseline data set. There is an additional statement that "additional discussion and a final determination of the baseline sediment data set will be presented in the PSCR." Please clarify how data since 2005 would be used for the baseline data set (e.g., Hurricane Ike occurred in September 2008).

16. In the Appendix A "Quality Assurance Review" prepared by Integral Consulting Inc., please revise the statement under Section 2.3 "Holding Times" as follows:

    "The method specified analytical holding time of one year from sample collection to sample extraction was met for all samples listed in Table A-1."

17. In the Appendix A "Quality Assurance Review" prepared by Integral Consulting Inc., please revise the second paragraph of Section 2.7 "Replicates" as follows:

    "Several laboratory duplicate RPD values were greater than the QAPP QC acceptance limit of 25% RPD and eight results were qualified as estimated (J/UJ) on this basis."

18. Please request that the introductory sections of the "Quality Assurance Review" report prepared by Integral Consulting Inc. and the "Data Verification Summary Reports" for SDG Nos. 05-1018741 and 05-1019347 prepared by Parsons include a full reference citation of the QAPP utilized in the verification and validation of the project data.

19. Document the following inconsistencies in the Quality Assurance Review. In addition, what is the impact on the usability of the 2005 data in light of these following issues with Attachment A1:

    - In the Attachment A1 "Data Verification Summary Report" for SDG No. 05-1018741 prepared by Parsons, the first sentence in the "General" Section needs to be revised to indicate that this SDG consists of forty (40) sediment samples, not soil samples.

    - In the Attachment A1 "Data Verification Summary Report" for SDG No. 05-1018741 prepared by Parsons, a general statement is made in the last paragraph of the "Precision"

Section that the overall precision was evaluated from the relative percent difference (RPD) values calculated from the sample analysis results for several field duplicate sample pairs. The field duplicate results and RPD values for these field duplicate samples should be presented in this Data Verification Summary Report and evaluated relative to the QC acceptance criteria given in the QAPP for field duplicate samples.

- In the Attachment A1 "Data Verification Summary Report" for SDG No. 05-1018741 prepared by Parsons, the following revision of first bullet in the second paragraph of the "Representativeness" Section based on the information given in Table 1 "Validated Samples and Analytical Parameters" would be more accurate:

  "Analytical holding time of 1 year from sample collection to sample extraction was met with the exception of samples 11261-81CM, 11193-68CM, and 15244-50&52cm, for which the holding time was exceeded by 24, 10, and 53 days."

- In the Attachment A1 "Data Verification Summary Report" for SDG No. 05-1018741 prepared by Parsons, the following revision of the last sentence in the second bullet in the second paragraph of the "Representativeness" Section based on the information given in Table 2 "Summary of Qualified Data" would be more accurate:

  "The results for 1,2,3,6,7,8-HxCDF (1.70 mg/kg) in samples Site 26 was qualified as "B" based on associated method blank contamination."

- In the Attachment A1 "Data Verification Summary Report" for SDG No. 05-1019347 prepared by Parsons, the table in the "Precision" Section summarizing laboratory duplicate sample results where the RPD exceeded the QAPP QC acceptance criteria of <25% RPD includes several entries where the RPD is less than 25%. How did Parsons explain and/or resolve this discrepancy.